

§Appl. No. 10/054,935
Amdt. dated April 20, 2004
Reply to Office Action of, January 28, 2004

Listing of Claims:

Please **amend** the claims as follows:

Claim 1 (Currently Amended) An isolated polynucleotide, comprising a polynucleotide sequence which codes without interruption for human Urb-ctf comprising amino acids 1-614 as set forth in SEQ ID NO 2, or a complete complement thereto.

Claim 2 (Currently amended) An isolated polynucleotide of claim 1, comprising the polynucleotide sequence from nucleotide positions 18-1919 as set forth in SEQ ID NO 1, or a complete complement thereto.

Claim 3 (Currently amended) An isolated human polynucleotide, comprising a polynucleotide sequence having 97% or more nucleotide sequence identity along its entire length to the polynucleotide sequence set forth in SEQ ID NO 1, which codes without interruption for a full-length human Urb-ctf having 614 amino acids, which has transcriptional regulatory activity, and which is up-regulated in a human breast cancer, wherein said polynucleotide hybridizes under high stringency conditions comprising 5X SSC, 0.5% SDS, 100 µg/ml denatured salmon sperm DNA and 50% formamide, at 42°C to the complete complement of the sequence set forth in SEQ ID NO:1.

Claim 4 (Currently amended) An isolated human polynucleotide of claim 3 having 99% or more sequence identity along its entire length to the polynucleotide sequence set forth in SEQ ID NO 1.

Claim 5 (Current amended) An isolated polynucleotide comprising a polynucleotide sequence selected from SEQ ID NO 1 which is specific for human Urb-ctf and which codes for a

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polypeptide, said polynucleotide comprising the position which corresponds to
amino acid 38 of SEQ ID NO 2,
amino acid 68 of SEQ ID NO 2,
amino acids 76-77 of SEQ ID NO 2,
amino acid 119 of SEQ ID NO 2,
amino acid 143-144 of SEQ ID NO 2,
amino acid 161 of SEQ ID NO 2,
amino acid 583 of SEQ ID NO 2,
amino acid 606 of SEQ ID NO 2, or
complete complements thereof.

Claim 6 (Currently Amended) An isolated polynucleotide of claim 5, comprising a polynucleotide coding for amino acids 1-263 of SEQ ID NO 2 or 459-614 of SEQ ID NO 2, or a complete complement thereof.

Claim 7 (Previously Presented) An isolated polynucleotide of claim 5, wherein said polynucleotide is effective as a primer in a polymerase chain reaction.

Claim 8 (Originally Presented) An isolated polynucleotide of claim 5, which codes for a polypeptide comprising at least eight amino acids in length.

Claim 9 (Originally Presented) An isolated human Urb-ctf polypeptide of claim 1 comprising, the amino acid sequence set forth in SEQ ID NO 2.

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Claim 10 (Originally presented) An isolated human Urb-ctf polypeptide of claim 3 comprising,

an amino acid sequence having 99% or more sequence identity to the amino acid sequence set forth in SEQ ID NO 2.

Claim 11 (Originally presented) An isolated human Urb-ctf polypeptide of claim 10, which has transcriptional regulatory activity.

Claim 12 (Originally presented) An isolated human polypeptide which is specific for Urb-ctf of claim 8, said polypeptide comprising:

amino acid 38 of SEQ ID NO 2,
amino acid 68 of SEQ ID NO 2,
amino acids 76-77 of SEQ ID NO 2,
amino acid 119 of SEQ ID NO 2,
amino acid 143-144 of SEQ ID NO 2,
amino acid 161 of SEQ ID NO 2,
amino acid 583 of SEQ ID NO 2, or
amino acid 606 of SEQ ID NO 2.

Claim 13 (Originally presented) An isolated polypeptide of claim 12, comprising, a polypeptide coding for amino acids 1-263 of SEQ ID NO 2 or 459-614 of SEQ ID NO 2.

Claim 14 (Originally presented) A method of treating breast cancer showing altered expression of human Urb-ctf of claim 1, comprising:

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administering to a subject in need thereof a therapeutic agent which is effective for regulating expression of said Urb-ctf gene or polypeptide.

Claim 15 (Originally presented) A method of claim 14, wherein said agent is an antisense which is effective to inhibit translation of the gene coding for human Urb-ctf.

Claim 16 (Originally presented) A method of diagnosing human breast cancer disease associated with abnormal Urb-ctf expression , or determining a subject's susceptibility to such disease, comprising:

assessing the expression of human Urb-ctf of claim 1 in a tissue sample comprising breast cancer cells.

Claim 17 (Originally presented) A method of claim 16, wherein assessing is: measuring expression levels of said gene, determining the genomic structure of said gene, determining the mRNA structure of transcripts from said gene, or measuring the expression levels of polypeptide coded for by said gene.

Claim 18 (Originally presented) A method of claim 16, wherein said assessing detecting is performed by:

Northern blot analysis, polymerase chain reaction (PCR), reverse transcriptase PCR, RACE PCR, or *in situ* hybridization, and

using a polynucleotide probe having a sequence selected from SEQ ID NO 1, a polynucleotide having 99% sequence identity or more to a sequence set forth in SEQ ID NO 1, or complements thereto.

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Claim 19 (Originally presented) A method of assessing a therapeutic or preventative intervention in a human subject having breast cancer, comprising,

determining the expression levels of human Urb-ctf of claim 1 in a tissue sample comprising breast cancer cells, or cells derived from breast cancer.

Claim 20 (Originally presented) A method for identifying an agent that modulates the expression of human Urb-ctf of claim 1 in cells, comprising,

contacting a cell population with a test agent under conditions effective for said test agent to modulate the expression of the gene coding for human Urb-ctf in cells, and
determining whether said test agent modulates said gene.

Claim 21 (Originally presented) A method of claim 20, wherein said agent is an antisense polynucleotide to a target polynucleotide sequence selected from SEQ ID NO 1 and which is effective to inhibit translation of said gene.

Claim 22 (Originally presented) A method for identifying an agent that modulates the biological activity of human Urb-ctf of claim 8, comprising,

contacting human Urb-ctf polypeptide of claim 8 with a test agent under conditions effective for said test agent to modulate the biological activity of said polypeptide, and
determining whether said test agent modulates said polypeptide.

Claim 23 (Originally presented) A non-human, transgenic mammal whose genome comprises a recombinant polynucleotide coding for a human Urb-ctf of claim 1 operatively linked to an expression control sequence effective to express said gene in breast tissue.

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Claim 24 (Originally presented) A non-human transgenic mammal of claim 22, wherein said expression control sequence is an inducible promoter.

Claim 25 (Originally presented) An antibody which is specific for human Urb-ctf of claim 1, which antibody is specific for an epitope comprising:

amino acid 38 of SEQ ID NO 2,
amino acid 68 of SEQ ID NO 2,
amino acids 76-77 of SEQ ID NO 2,
amino acid 119 of SEQ ID NO 2,
amino acid 143-144 of SEQ ID NO 2,
amino acid 161 of SEQ ID NO 2,
amino acid 583 of SEQ ID NO 2, or
amino acid 606 of SEQ ID NO 2.

Claim 26 (Originally presented) A method of advertising human Urb-ctf of claim 1 for sale, commercial use, or licensing, comprising,
displaying in a computer-readable medium a polynucleotide sequence set forth in SEQ ID NO 1, or complements thereto, or a polypeptide sequence set forth in sequence in SEQ ID NO 2.

Claim 27 (Originally presented) A method of selecting a breast cancer marker from a database comprising polynucleotide sequences, comprising
displaying, in a computer-readable medium, a polynucleotide sequence or polypeptide sequence for human Urb-ctf of claim 1, or complements to the polynucleotides sequence, wherein said displayed sequences have been retrieved from said database upon selection by a user.

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Claim 28 (Currently Amended) An isolated polynucleotide of claim 1, comprising the polynucleotide sequence from nucleotide positions 1-4372 as set forth in SEQ ID NO 1, or a complete complement thereto.

Claim 29 (Previously Presented) An isolated polynucleotide of claim 5, which comprises at least 15 nucleotides.

Claim 30 (Previously Presented) An isolated polynucleotide of claim 5, which comprises at least 24 nucleotides.

Claim 31 (Previously Presented) An isolated polynucleotide of claim 5, which comprises at least 30 nucleotides.

Claim 32 (Previously Presented) An isolated polynucleotide of claim 5, which comprises at least 45 nucleotides.